

SEQUENCE LISTING

<110> Luo, Ying  
Mancebo, Halena

<120> NOVEL SYK KINASE-ASSOCIATED CELL CYCLE PROTEINS, COMPOSITIONS, AND METHODS OF USE

<130> A-68412-1/RMS/DHR

<140> US 10/088,960  
<141> 2002-03-22

<150> US 09/404,967  
<151> 1999-09-24

<150> PCT/US 00/26338  
<151> 2000-09-25

<160> 12

<170> PatentIn version 3.1

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<220>  
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<222> (1473)..(1473)  
<223> "n" at position 1473 can be any base.

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 <222> (373)..(373)  
 <223> "Xaa" at position 373 can be any amino acid.

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Thr Gln Ile Leu Gln Gln Ala Leu Lys Asp Ser Asn Gly Asn Leu Glu  
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Leu Ala Val Ala Phe Leu Thr Ala Lys Asn Ala Lys Thr Pro Gln Gln  
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Glu Glu Thr Thr Tyr Tyr Gln Thr Ala Leu Pro Gly Asn Asp Arg Tyr  
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Ile Ser Val Gly Ser Gln Ala Asp Thr Asn Val Ile Asp Leu Thr Gly  
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Asp Asp Lys Asp Asp Leu Gln Arg Thr Ile Ala Leu Ser Leu Ala Glu  
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Ser Asn Arg Ala Phe Arg Glu Thr Gly Ile Thr Asp Glu Glu Gln Ala  
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Ile Ser Arg Val Leu Glu Ala Ser Ile Ala Glu Asn Lys Ala Cys Leu  
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Lys Arg Thr Pro Thr Glu Val Trp Arg Asp Ser Arg Asn Pro Tyr Asp  
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Arg Lys Arg Gln Asp Lys Ala Pro Val Gly Leu Lys Asn Val Gly Asn  
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Thr Cys Trp Phe Ser Ala Val Ile Gln Ser Leu Phe Asn Leu Leu Glu  
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Phe Arg Arg Leu Val Leu Asn Tyr Lys Pro Pro Ser Asn Ala Gln Asp  
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Leu Pro Arg Asn Gln Lys Glu His Arg Asn Leu Pro Phe Met Arg Glu  
210 215 220

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225 230 235 240

Asp Pro Ser Arg Ala Val Glu Ile Leu Lys Asp Ala Phe Lys Ser Asn  
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Asp Ser Gln Gln Gln Asp Val Ser Glu Phe Thr His Lys Leu Leu Asp  
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Trp Leu Glu Asp Ala Phe Gln Met Lys Ala Glu Glu Glu Thr Asp Glu  
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Val Leu Thr Phe Xaa Leu Ser Arg Phe Glu Phe Asn Gln Ala Leu Gly  
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Asp Ile Ala Val Thr Lys Ser Ser Trp Glu Glu Leu Val Arg Asp Ser  
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Val Glu Glu Asp Asn Gln Arg Phe Glu Lys Glu Leu Glu Glu Trp Asp  
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Asp Pro Glu Tyr Leu Glu Gln Pro Ser Arg Ser Asp Phe Ser Lys His  
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Glu Asp Lys Ser Pro Glu Thr Val Leu Gln Ser Ala Ile Lys Leu Glu  
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Tyr Ala Arg Leu Val Lys Leu Ala Gln Glu Asp Thr Pro Pro Glu Thr  
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Asp Tyr Arg Leu His His Val Val Val Tyr Phe Ile Gln Asn Gln Ala  
805 810 815

Pro Lys Lys Ile Ile Glu Lys Thr Leu Leu Glu Gln Phe Gly Asp Arg  
820 825 830

Asn Leu Ser Phe Asp Glu Arg Cys His Asn Ile Met Lys Val Ala Gln  
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Ala Lys Leu Glu Met Ile Lys Pro Glu Glu Val Asn Leu Glu Glu Tyr  
850 855 860

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885 890 895

Leu Leu Phe Leu Ile Cys Ala Tyr Gln Asn Asn Lys Glu Leu Leu Ser  
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Lys Gly Leu Tyr Arg Gly His Asp Glu Glu Leu Ile Ser His Tyr Arg  
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Arg Glu Cys Leu Leu Lys Leu Asn Glu Gln Ala Ala Glu Leu Phe Glu  
930 935 940

Ser Gly Glu Asp Arg Glu Val Asn Asn Gly Leu Ile Ile Met Asn Glu  
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Phe Ile Val Pro Phe Leu Pro Leu Leu Leu Val Asp Glu Met Glu Glu  
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Lys Asp Ile Leu Ala Val Glu Asp Met Arg Asn Arg Trp Cys Ser Tyr  
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Leu Pro Lys Leu Leu Asp Cys Ser Met Glu Ile Lys Ser Phe His  
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Glu Pro Pro Lys Leu Pro Ser Tyr Ser Thr His Glu Leu Cys Glu  
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<213> Homo sapiens
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<222> (1473)..(1473)
<223> "n" at position 1473 can be any base.
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<222> (373)..(373)  
<223> "Xaa" at position 373 can be any amino acid.

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Leu Ala Val Ala Phe Leu Thr Ala Lys Asn Ala Lys Thr Pro Gln Gln  
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Glu Glu Thr Thr Tyr Tyr Gln Thr Ala Leu Pro Gly Asn Asp Arg Tyr  
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Cys Thr Ser Pro Val Asp Asp Ile Asp Ala Ser Ser Pro Pro Ser Gly  
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Leu Lys Glu Glu Thr Ile Gln Ile Ile Thr Lys Ala Ser His Glu His  
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Glu Asp Lys Ser Pro Glu Thr Val Leu Gln Ser Ala Ile Lys Leu Glu  
770 775 780

Tyr Ala Arg Leu Val Lys Leu Ala Gln Glu Asp Thr Pro Pro Glu Thr  
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Asp Tyr Arg Leu His His Val Val Val Tyr Phe Ile Gln Asn Gln Ala  
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Pro Lys Lys Ile Ile Glu Lys Thr Leu Leu Glu Gln Phe Gly Asp Arg  
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Asn Leu Ser Phe Asp Glu Arg Cys His Asn Ile Met Lys Val Ala Gln  
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Ala Lys Leu Glu Met Ile Lys Pro Glu Glu Val Asn Leu Glu Glu Tyr  
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Lys Gly Leu Tyr Arg Gly His Asp Glu Glu Leu Ile Ser His Tyr Arg  
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Arg Glu Cys Leu Leu Ile Leu Asn Leu Lys Arg Lys Gln Lys Pro Ile  
930 935 940

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980 985 990

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995 1000 1005

Trp Cys Ser Tyr Leu Gly Gln Glu Met Glu Pro His Leu Gln Glu  
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Lys Leu Thr Asp Phe Leu Pro Lys Leu Leu Asp Cys Ser Met Glu  
1025 1030 1035

Ile Lys Ser Phe His Glu Pro Pro Lys Leu Pro Ser Tyr Ser Thr  
1040 1045 1050

His Glu Leu Cys Glu Arg Phe Ala Arg Ile Met Leu Ser Leu Ser  
1055 1060 1065

Arg Thr Pro Ala Asp Gly Arg  
1070 1075

<210> 5  
<211> 834  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (373)..(373)  
<223> "Xaa" at position 373 can be any amino acid.

<400> 5

Met Thr Val Glu Gln Asn Val Leu Gln Gln Ser Ala Ala Gln Lys His  
1 5 10 15

Gln Gln Thr Phe Leu Asn Gln Leu Arg Glu Ile Thr Gly Ile Asn Asp  
20 25 30

Thr Gln Ile Leu Gln Gln Ala Leu Lys Asp Ser Asn Gly Asn Leu Glu  
35 40 45

Leu Ala Val Ala Phe Leu Thr Ala Lys Asn Ala Lys Thr Pro Gln Gln  
50 55 60

Glu	Glu	Thr	Thr	Tyr	Tyr	Gln	Thr	Ala	Leu	Pro	Gly	Asn	Asp	Arg	Tyx
65						70			75					80	
Ile	Ser	Val	Gly	Ser	Gln	Ala	Asp	Thr	Asn	Val	Ile	Asp	Leu	Thr	Gly
						85			90					95	
Asp	Asp	Lys	Asp	Asp	Leu	Gln	Arg	Thr	Ile	Ala	Leu	Ser	Leu	Ala	Glu
						100		105					110		
Ser	Asn	Arg	Ala	Phe	Arg	Glu	Thr	Gly	Ile	Thr	Asp	Glu	Glu	Gln	Ala
						115		120					125		
Ile	Ser	Arg	Val	Leu	Glu	Ala	Ser	Ile	Ala	Glu	Asn	Lys	Ala	Cys	Leu
						130		135				140			
Lys	Arg	Thr	Pro	Thr	Glu	Val	Trp	Arg	Asp	Ser	Arg	Asn	Pro	Tyr	Asp
						145		150				155		160	
Arg	Lys	Arg	Gln	Asp	Lys	Ala	Pro	Val	Gly	Leu	Lys	Asn	Val	Gly	Asn
						165			170				175		
Thr	Cys	Trp	Phe	Ser	Ala	Val	Ile	Gln	Ser	Leu	Phe	Asn	Leu	Leu	Glu
						180		185				190			
Phe	Arg	Arg	Leu	Val	Leu	Asn	Tyr	Lys	Pro	Pro	Ser	Asn	Ala	Gln	Asp
						195		200				205			
Leu	Pro	Arg	Asn	Gln	Lys	Glu	His	Arg	Asn	Leu	Pro	Phe	Met	Arg	Glu
						210		215				220			
Leu	Arg	Tyr	Leu	Phe	Ala	Leu	Leu	Val	Gly	Thr	Lys	Arg	Lys	Tyr	Val
						225		230				235		240	
Asp	Pro	Ser	Arg	Ala	Val	Gln	Ile	Leu	Lys	Asp	Ala	Phe	Lys	Ser	Asn
						245			250				255		
Asp	Ser	Gln	Gln	Gln	Asp	Val	Ser	Glu	Phe	Thr	His	Lys	Leu	Leu	Asp
						260		265				270			
Trp	Leu	Glu	Asp	Ala	Phe	Gln	Met	Lys	Ala	Glu	Glu	Thr	Asp	Glu	
						275		280				285			
Glu	Lys	Pro	Lys	Asn	Pro	Met	Val	Glu	Leu	Phe	Tyr	Gly	Arg	Phe	Leu
						290		295				300			

Ala Val Gly Val Leu Glu Gly Lys Lys Phe Glu Asn Thr Glu Met Phe  
305 310 315 320

Gly Gln Tyr Pro Leu Gln Val Asn Gly Phe Lys Asp Leu His Glu Cys  
325 330 335

Leu Glu Ala Ala Met Ile Glu Gly Glu Ile Glu Ser Leu His Ser Glu  
340 345 350

Asn Ser Gly Lys Ser Gly Gln Glu His Trp Phe Thr Gly Leu Pro Pro  
355 360 365

Val Leu Thr Phe Xaa Leu Ser Arg Phe Glu Phe Asn Gln Ala Leu Gly  
370 375 380

Arg Pro Glu Lys Ile His Asn Lys Leu Glu Phe Pro Gln Val Leu Tyr  
385 390 395 400

Leu Asp Arg Tyr Met His Arg Asn Arg Glu Ile Thr Arg Ile Lys Arg  
405 410 415

Glu Glu Ile Lys Arg Leu Lys Asp Tyr Leu Thr Val Leu Gln Gln Arg  
420 425 430

Leu Glu Arg Tyr Leu Ser Tyr Gly Ser Gly Pro Lys Arg Phe Pro Leu  
435 440 445

Val Asp Val Leu Gln Tyr Ala Leu Glu Phe Ala Ser Ser Lys Pro Val  
450 455 460

Cys Thr Ser Pro Val Asp Asp Ile Asp Ala Ser Ser Pro Pro Ser Gly  
465 470 475 480

Ser Ile Pro Ser Gln Thr Leu Pro Ser Thr Thr Glu Gln Gln Gly Ala  
485 490 495

Leu Ser Ser Glu Leu Pro Ser Thr Ser Pro Ser Ser Val Ala Ala Ile  
500 505 510

Ser Ser Arg Ser Val Ile His Lys Pro Phe Thr Gln Ser Arg Ile Pro  
515 520 525

Pro Asp Leu Pro Met His Pro Ala Pro Arg His Ile Thr Glu Glu Glu  
530 535 540

Leu Ser Val Leu Glu Ser	Cys	Leu His Arg Trp Arg Thr Glu Ile Glu	
545	550	555	560
Asn Asp Thr Arg Asp Leu Gln Glu Ser Ile Ser Arg Ile His Arg Thr			
565 570 575			
Ile Glu Leu Met Tyr Ser Asp Lys Ser Met Ile Gln Val Pro Tyr Arg			
580 585 590			
Leu His Ala Val Leu Val His	Glu	Gly Gln Ala Asn Ala Gly His Tyr	
595	600	605	
Trp Ala Tyr Ile Phe Asp His	Arg	Glu Ser Arg Trp Met Lys Tyr Asn	
610	615	620	
Asp Ile Ala Val Thr Lys Ser	Ser	Trp Glu Glu Leu Val Arg Asp Ser	
625	630	635	640
Phe Gly Gly Tyr Arg Asn Ala	Ser	Ala Tyr Cys Leu Met Tyr Ile Asn	
645	650	655	
Asp Lys Ala Gln Phe Leu Ile	Gln	Glu Glu Phe Asn Lys Glu Thr Gly	
660	665	670	
Gln Pro Leu Val Gly Ile Glu	Thr	Leu Pro Pro Asp Leu Arg Asp Phe	
675	680	685	
Val Glu Glu Asp Asn Gln Arg	Phe	Glu Lys Glu Leu Glu Trp Asp	
690	695	700	
Ala Gln Leu Ala Gln Lys Ala	Leu	Gln Glu Lys Leu Leu Ala Ser Gln	
705	710	715	720
Lys Leu Arg Glu Ser Glu Thr	Ser	Val Thr Thr Ala Gln Ala Ala Gly	
725	730	735	
Asp Pro Glu Tyr Leu Glu Gln	Pro	Ser Arg Ser Asp Phe Ser Lys His	
740	745	750	
Leu Lys Glu Glu Thr Ile Gln	Ile	Ile Thr Lys Ala Ser His Glu His	
755	760	765	
Glu Asp Lys Ser Pro Glu Thr	Val	Leu Gln Ser Ala Ile Lys Leu Glu	
770	775	780	

Tyr Ala Arg Leu Val Lys Leu Ala Gln Glu Asp Thr Pro Pro Glu Thr  
785 790 795 800

Asp Tyr Arg Leu His His Val Val Val Tyr Phe Ile Gln Asn Gln Ala  
805 810 815

Pro Lys Lys Ile Ile Glu Lys Thr Leu Leu Glu Gln Phe Gly Asp Arg  
820 825 830

Asn Leu

<210> 6

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 6

Arg Thr Val Leu Gly Val Ile Gly Asp  
1 5

<210> 7

<211> 9

<212> PRT

<213> Artificial

<220>

<223> synthetic

<400> 7

Arg Thr Ala Leu Gly Asp Ile Gly Asn  
1 5

<210> 8

<211> 27

<212> PRT

<213> Rattus sp.

<400> 8

Tyr Met Thr Val Ser Ile Ile Asp Arg Phe Met Gln Asp Ser Cys Val  
1 5 10 15

Pro Lys Lys Met Leu Gln Leu Val Gly Val Thr  
20 25

<210> 9  
<211> 28  
<212> PRT  
<213> Mus sp.

<400> 9

Lys Phe Arg Leu Leu Gln Gln Thr Met Tyr Met Thr Val Ser Ile Ile  
1 5 10 15

Asp Arg Phe Met Gln Asn Ser Cys Val Pro Lys Lys  
20 25

<210> 10  
<211> 28  
<212> PRT  
<213> Mus sp.

<400> 10

Arg Ala Ile Leu Asp Ile Asp Trp Leu Ile Gln Val Gln Met Lys Phe  
1 5 10 15

Arg Leu Leu Gln Glu Thr Met Tyr Met Thr Val Ser  
20 25

<210> 11  
<211> 26  
<212> PRT  
<213> Mus sp.

<400> 11

Asp Arg Phe Leu Gln Ala Gln Leu Val Cys Arg Lys Lys Leu Gln Trp  
1 5 10 15

Gly Ile Thr Ala Leu Leu Leu Ala Ser Lys  
20 25

<210> 12  
<211> 18  
<212> PRT  
<213> Mus sp.

<400> 12

Met Ser Val Leu Arg Gly Lys Leu Gln Leu Val Gly Thr Ala Ala Met  
1 5 10 15

Leu Leu